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Science Monthly for January and February, under the title "The Aryan Question and Prehistoric Man." The storage of electricity will be explained in a fully illustrated article by Professor Samuel Sheldon of the Brooklyn Polytechnic Institute, in the January number.

—The president of the Royal Geographical Society declared in 1889 that "the most salient event of the year has been the daring journey of Fridtjof Nansen and his little party of Norwegians and Lapps across the inland ice of Greenland." Dr. Nansen's fully illustrated account of his adventures and of his extraordinary success will be published shortly, both in London and New York, by the Longmans.

—The action of Congress in setting apart a reservation of California forest land considerably larger in extent than the State of Rhode Island furnishes a theme for the leading editorial in *Garden and Forest* for Dec. 3. Some of the other subjects discussed are "House Gardening in Cities;" "The Trees of Kansas;" "A Fatal Disease of the Cranberry;" notes on orchids, ferns, wild-flowers, and chrysanthemums; and seasonable counsel for all interested in trees and shrubs. The principal illustration is of a vase of chrysanthemums, which is an object-lesson in the decorative value of these favorite flowers.

—The American Academy of Political and Social Science at Philadelphia is doing a valuable work in publishing material of value to students of economics and politics. It is making a specialty just now of the railroad problem. The July number of its proceedings contained an account of the reform in railway passenger tariffs recently introduced into Hungary. The January number will contain an account of the system just introduced into Austria. The work of the academy is all the more valuable on account of its strictly scientific character. The organization takes no sides, but contents itself with an objective presentation of the facts relating to the subject.

—Among the matter which has recently appeared in the *American Naturalist*, and which is in preparation, the following titles may be mentioned: "The Evolution of Mind from a Neo-Lamarckian Standpoint," by Professor E. D. Cope; "The Effects of the Electric Current on Kemmler's Body," by Dr. E. C. Spitzka; "On the Languages and Lore of the Zuñi Pueblos," by Dr. J. W. Fewkes of Harvard University; "On a Family of Hermaphrodites," by Dr. Luce; "The Wild Buffalo of Mindoro," by Professor J. B. Steere; "The Physiological Effects of Special Feeding on Bees," by Professor A. J. Cooke of Michigan State Agricultural College; and "The Metamorphic Forms of the American Newt," by Professor Simon Gage of Cornell University.

—Messrs. Ticknor & Co. have secured the exclusive sale for America, and will publish, by arrangement with Mr. B. T. Batsford, the London publisher, a limited edition of "Architecture of the Renaissance in England," by J. Alfred Gotch and W. Talbot Brown. The first part will appear immediately, and the others at intervals of two or three months.

—Last week's number of *The Illustrated American* is styled the "Naval Number," because sixteen pages are dedicated to naval matters. "Where We build our War-Vessels" is a description of the New York Navy Yard, illustrated; and "Our Battle-Ships" describes and illustrates the new battle-ship designed for the Bureau of Construction at Washington, and the most formidable war-ships of the foreign powers. A portrait of Admiral David D. Porter serves as the frontispiece. The wonders of the Nile are continued in an illustrated article describing hundred-gated Thebes.

—Lieut. Willoughby Walke, instructor in charge of the United States Artillery School laboratory, has made a series of experiments with the object of determining the strength of various newly invented or patented explosives. The composition of these new explosives, says *Engineering*, differs much; but they have all one feature in common, viz., that their inventors all claim that

Publications received at Editor's Office,
Nov. 24-Dec. 5.

- BAKER, D. W. History of the Harvard College Observatory during the Period 1840-1890. Cambridge, Harvard University. 32 p. 8°.
- BALDWIN, J. Harper's Sixth Reader. New York, Harper. 504 p. 12°. 90 cents.
- BRACKETT, C. F., and others. Electricity in Daily Life. New York, Scribner. 288 p. 8°.
- CAJORI, F. The Teaching and History of Mathematics in the United States. Washington, Government. 400 p. 8°.
- CENTURY Dictionary, The. Vol. IV. M-P. New York, The Century Co. 1324 p. 1°. \$10.
- COLLEGE Advance, The. Vol. i. No. 1. Winfield, Kan., E. H. Vaughan. 4 p. 1°. 25 cents per year.
- EDDY, H. T. Maximum Stresses under Concentrated Loads. New York, Van Nostrand. 100 p. 8°.
- GILMAN, N. P. Industrial Partnership or Profit Sharing. Boston, G. H. Ellis. 18 p. 24°.
- HARVARD COLLEGE, Annals of the Astronomical Observatory of. Vol. XXI. Part II. Investigations of the New England Meteorological Society in the Year 1889. Cambridge, W. H. Wheeler, Pr. 273 p. 4°.
- Same. Vol. XXX. Part I. Observations made at the Blue Hill Meteorological Observatory, Massachusetts, in the Year 1889. Cambridge, John Wilson & Son, Pr. 75 p. 4°.
- HUDSON, H. N. The Ancient Mariner. Boston, Ginn. 21 p. 12°.
- LANGE, Helene. Higher Education of Women in Europe. Tr. by L. R. Klemm, Ph.D. (International Education. Series.) New York, Appleton. 186 p. 12°. \$1.25.
- MACAULAY'S Second Essay on the Earl of Chatham. With Notes and a Sketch of Macaulay's Life by D. H. M. Boston, Ginn. 91 p. 12°.
- McMILLAN, W. G. A Treatise on Electro-Metallurgy. London, Charles Griffin & Co.; Philadelphia, Lippincott. 387 p. 12°. \$3.50.
- MACOUN, J. Catalogue of Canadian Plants. Part V. Acrogens. Montreal, W. Foster Brown & Co. 428 p. 8°.
- MODIGLIANI, E. Un Viaggio a Nias. Milan, Fratelli Treves. 726 p. 8°.
- NICOLSON, F. W. P. Terenti Afri. Phormio. Boston, Ginn. 66 p. 12°. 30 cents.
- PEARSON, W. H. List of Canadian Hepaticæ. Montreal, W. Foster Brown & Co. 31 p. 8°.
- PICKERING, E. C., and WENDELL O. C. Results of Observations with the Meridian Photometer during the Years 1882-88. (Annals of the Astronomical Observatory of Harvard College. Vol. XXIV.) Cambridge, John Wilson & Son, Pr. 267 p. 4°.
- ROLFE, J. C. P. Terenti Afri. Heavton Timorv-menos. Boston, Ginn. 61 p. 12°. 30 cents.

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their product is as powerful as dynamite. The principal difficulty in arranging the experiments was to decide in what way the strength of the explosives should be tested, as no method yet invented can be considered entirely satisfactory. Finally Lieut. Walke decided to use the Quinan pressure gauge. The instrument used consisted of a heavy block of wood upon which was bolted a cast-iron block. In this block four wrought-iron guides were twisted around the circumference of a circle four inches in diameter, and were connected by a ring at their outer ends. A steel plate was let into the block, and was flush with its upper surface. The piston, which rested on a plug of lead, was of tempered steel four inches in diameter and five inches long, and moved freely between the guides. It weighed twelve pounds and a quarter. On the top of this piston was a parabolic cavity to hold the charge of explosive. The shot, made of tempered steel, was four inches in diameter and ten inches long, weighing four pounds and a half. It was bored down its centre to receive a capped fuze. To operate the instrument, a plug or cylinder of lead was placed on the steel plate, and the piston lowered gently down on it. The charge of explosive being placed in the cavity, the shot was gently lowered upon the piston. On firing the charge, the shot is thrown out and the piston forced down on the lead plug, which it compresses, the amount of compression being a measure of the strength of the explosive. Twenty-seven explosives in all being tried, the results were compared with those obtained with a sample of nitroglycerine, the strength of which was reckoned as 100. The results placed explosive gelatine and hellhoffite first with a strength of 106.17; gun-cotton and dynamite had each a strength of over 80; emmensite, a new American explosive, one of nearly 78; bellite, one of 65.70; and melenite, the famous French explosive,

which is not nearly so safe to handle as bellite, had a strength of only 50.82. The above figures are of course not absolute, but they, at any rate, show the order in which the various explosives come.

INDUSTRIAL NOTES.

A Model Electric-Light Plant.

IN April of last year the electric-light system of the Eureka Electric Light Company of this city, then known as the Loomis system, was illustrated and described in these columns. Since that time the progress of the Eureka Company has been steady, though not as rapid, perhaps, as that of its older and larger competitors. Lighting and power plants have been installed in many parts of the country, and many improvements, both mechanical and electrical, have been made in minor details of the apparatus.

One of the latest of the Eureka Company's installations is a five-hundred light plant in the Vanderbilt Building, a large office building on Nassau Street, this city. The dynamo, of five-hundred-light capacity, is driven by a fifty-horse-power Fitchburg engine the Evans friction cone (also described in these columns some time ago) being used instead of belting, to transmit the power from engine to dynamo. This friction cone admits of a very compact arrangement of machinery, much less floor-space being required, as the engine and dynamo stand close together. This is an important consideration in modern office buildings, especially where space is valuable. The installation as a whole is one of the simpler and yet most complete, both electrically and mechanically, to be found in this city.

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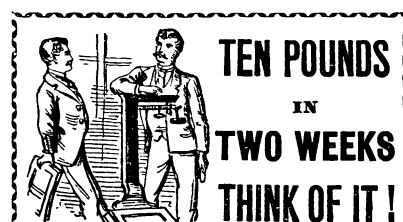
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CALENDAR OF SOCIETIES.

Anthropological Society, Washington.

Dec. 2.—Discussion on Arrows and Arrow-Makers; Robert Fletcher, Gambling-Sticks from Hupa Valley, California; Otis T. Mason, The Meeting of the American Folk-Lore Society.

Philosophical Society, Washington.

Dec. 6.—E. G. Fischer, On Standard Screws and Threads; Gilbert Thompson, An Example of Work in Barometric Hypsometry; B. E. Fernow, On the Artificial Production of Rainfall.

Appalachian Mountain Club, Boston.

Dec. 10.—Miss M. A. J. Frothingham, From the Gemmi to the Breithorn; H. H. Campbell, A Trip to the "Seven Ponds" in Maine (read by Mr. A. E. Scott).

Dec. 18 (special meeting).—Charles G. Van Brunt, An Ascent of Sierra Blanca, Col.

Wants.

Any person seeking a position for which he is qualified by his scientific attainments, or any person seeking some one to fill a position of this character, be it that of a teacher of science, chemist, draughtsman, or what not, may have the 'Wants' inserted under this head FREE OF COST, if he satisfies the publisher of the suitable character of his application. Any person seeking information on any scientific question, the address of any scientific man, or who can in any way use this column for a purpose consonant with the nature of the paper, is cordially invited to do so.

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WANTED.—There being a considerable annual income for the purchase of books for the Museum Reference Library of Iowa College, it is desirable to have at hand any and all circulars, specimen sheets, catalogues, etc., of all works on Natural History in general, both foreign and domestic. Circulars of museum supplies, apparatus, etc., etc., desired also. State terms. Address ERWIN H. BARBOUR, Box 1333, Grinnell, Iowa.

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